CLAIMS

1.   A method for routing and caching packets of data in a multicast network, comprising:

receiving a packet having a header section and a payload section;

5   inspecting the payload section of the packet in a network core for use in determining how to route the packet to subscribers;

selectively routing the packet based upon the inspecting; and

locally caching data from the packet in the network core.

2.   The method of claim 1, further including performing the inspecting step at a
10   router.

3.   The method of claim 1 wherein the inspecting step includes applying a filter to information in the payload section.

4.   The method of claim 3, further including propagating the filter to a router in the network for use in performing the inspecting.

15   5.   The method of claim 1, further including programming a router in the network for performing the receiving, inspecting, and routing steps.

6.   The method of claim 1 wherein the inspecting step includes inspecting attributes for use in determining how to route the packet.

7.   The method of claim 1, further including time marking the cached data.

20   8.   The method of claim 1, further including indexing the cached data.

9.   The method of claim 1, further including:

receiving a request for data; and

determining whether the cached data satisfies the request.

10.   The method of claim 1, further including:

25   locally caching data from the packet at an edge routing node.

11.   The method of claim 1, further including:

removing the cached data after the expiration of a time frame T.

12.   A network for routing and caching packets of data, comprising:

an edge routing node that receives and routs packets having a header section and a payload section, the edge routing node including:

an intelligent router that routs the received packets, the intelligent router including instructions for:

inspecting the payload section of the packets in a network core for use in determining how to route the packets to subscribers; and

selectively routing the packets based upon the inspecting; and

a cache manager, operatively connected to the intelligent router, the cache manager including instructions for:

locally caching data from the packets in a local cache; and

one or more core routing nodes that receive and rout the packets.

13. The network of claim 12, further comprising:

an agent, operatively connected to the edge routing node, that includes instructions for:

determining location of cached data;

retrieving cached data from the local cache; and

processing retrieved cache data.

14. The network of claim 12, wherein one of the one or more core routing nodes is directly upstream from the edge routing node, the directly upstream core routing node including:

an intelligent router that routs the received packets, the intelligent router including instructions for:

inspecting the payload section of the packets in a network core for use in determining how to route the packets to subscribers; and

selectively routing the packets based upon the inspecting; and

a cache manager, operatively connected to the intelligent router, the cache manager including instructions for:

locally caching data from the packets in a local cache.

15. The network of claim 12, further comprising:

a plurality of channel manager that provide properties for a plurality of channels.

16. The network of claim 12, wherein the cache manager further includes instructions for:

time marking the cached data.

17. The network of claim 12, wherein the cache manager further includes instructions for:

indexing the cached data.

18. The network of claim 12, wherein the cache manager further includes instructions for:

receiving a request for data; and

determining whether the cached data satisfies the request.

19. An apparatus for routing and caching packets of data in a multicast network, the apparatus including a plurality of processors and instructions for:

receiving a packet having a header section and a payload section;

inspecting the payload section of the packet in a network core for use in determining how to route the packet to subscribers;

selectively routing the packet based upon the inspecting; and

locally caching data from the packet in the network core.

20. The apparatus of claim 19, wherein the plurality of processors include a first processor and a second processor, wherein the first processor executes the inspecting and selectively routing instructions and the second processor executes the locally caching instruction.